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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,118	02/11/2004	Tetsuya Shigeta	Q79770	1247

23373 7590 02/01/2007  
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EXAMINER
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SHAPIRO, LEONID

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/01/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/775,118	SHIGETA ET AL.	
	Examiner	Art Unit	
	Leonid Shapiro	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Inoue (US Patent No. 5,784,037).

Inoue teaches a display panel driving apparatus (See Col. 1, Lines 11-16), comprising:

a display control section for controlling display on a display panel (See Fig. 1, item 9, Col. 5, Lines 28-42);

a drive section for driving the display panel on the basis of a signal supplied from the display control section (See Fig. 1, items 1,9, Col. 6, Lines 37-42); and

a data transfer device for transferring data between the display control section and the drive section (See Fig. 1, items 8,14, Col. 6, Lines 43-59),

wherein the drive section comprises a control signal conversion section for decoding signals supplied from the display control section, and generating drive pulse generation control signals (See Fig. 1, items 7-8, Col. 7, Lines 35-51).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2629

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Awamoto et al. (US Patent No. 6,452,590 B1).

Inoue does not disclose a drive pulse generation circuit, wherein the drive pulse generation circuit comprises a plurality of switches that turn on/off according to a drive pulse generation control signal, and generates drive pulses for driving the display panel by using on/off of these switches.

Awamoto et al. teaches a drive pulse generation circuit, wherein the drive pulse generation circuit comprises a plurality of switches that turn on/off according to a drive pulse generation control signal, and generates drive pulses for driving the display panel by using on/off of these switches (See Fig. 4, items 41-44, Col. 9, Lines 50-65).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate teachings of Awamoto et al. into Inoue system in order to decrease the number of components in the driving circuit (See Col. 2, Lines 40-44 in the Awamoto et al. reference).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Solomon (US Patent No. 5,329,275).

Inoue teaches a display panel driving apparatus (See Col. 1, Lines 11-16) comprising:

a display control section comprising a storage section for storing address data (See Fig. 1, item 10), a read section for reading address data, a read section stored for reading address data stored in the storage section (See Fig. 1, items 9,14, Col. 6, Lines 37-59) and a shift clock generation section for generating a shift clock (See Fig. 1, items 6,8, Col. 6, Lines 40-42);

a drive section comprising a shift register for sequentially storing the address data according to the shift clock (See Fig. 1, item 6, Col. 6, Lines 40-42) and a driving circuit for driving a display (See Fig. 1, items 1,8); and

a data transfer device for transferring data between the display control section and the drive section (See Fig. 1, items 8,14, Col. 6, Lines 43-59),

wherein the shift clock generation section generates the shift clock only during a period in which address data is being read from the storage section (see Fig. 1, items 6,8, Col. 6, Lines 37-59 and Figs. 4-5, items SCAN LINE ADDRESS DATA, VIDEO DATA, from Col. 6, Line 60 to Col. 7, Line 27).

Inoue does not disclose a latch enable generation section based on the shift clock.

Solomon teaches a latch enable generation section (See Figure, item P2, Col. 3, Lines 3-6).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate teachings of Solomon into Inoue system in order to use standard interface (See Col. 2, Line 49 in the Solomon reference).

***Allowable Subject Matter***

6. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claim 4 the major difference between the teaching of the prior art of record (Inoue, Solomon and Awamoto et al.) and the instant invention is that converter for conducting parallel-to-serial conversion on the address data and the shift clock, and a transmission section for converting a serial signal resulting from parallel-to-serial conversion conducted in the parallel-to-serial converter to a signal conforming to a differential serial transmission system, and transferring a resultant signal toward the drive section via a transmission line; and in the drive section, a reception section for receiving the address data and the shift clock transferred via the transmission line, and a serial-to-parallel converter for conducting serial-to-parallel conversion on the address data and the shift clock received by the reception section.

***Telephone Inquire***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS  
11.11.06



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